

REMARKS

Claims 1-6 and 22-28 are currently pending in the present patent application. In a final Office Action mailed 26 October 2005, the Examiner maintained his rejection of claims 1-6 and 22-26 under 35 U.S.C. § 102(a) as being anticipated by applicant's admitted prior art (AAPA) disclosed in the present application. Also maintained were the rejections of claims 27 and 28 as being unpatentable under 35 U.S.C. § 103(a) over the AAPA. All these rejections were maintained in an Advisory Action mailed on March 8, 2006.

Claim 1 recites, in part, a DMOS device including a plurality of contacts of conductive material. The contacts extend in the contact openings as far as the first conductive region, second conductive region, and the body-contact region. Each body-contact region has a boundary that is coincident with a boundary of a corresponding contact.

Claim 1 was amended in the prior amendment filed to recite this structure of the body-contact regions relative the contacts. In the final Office Action, the Examiner merely makes a conclusory statement that the "AAPA further teaches each body-contact region has a boundary (vertical side of contact hole (see [F]ig 12)[]) that is coincident with a boundary of a corresponding contact." The explanation in the prior amendment clearly evidences that this is not the case.

Figure 12 is a cross-sectional view showing the body-contact mask 30 that is formed to form the body-contact regions 31. This figure does not even show a region for the contact that is to be coupled to the illustrated body-contact region. Given this fact, the undersigned is at a loss to understand how Figure 12 discloses the recited body-contact region having a boundary that is coincident with a boundary of a corresponding contact when the contact or boundary thereof is not even shown in Figure 12. No such contact mask 36 is even present in Figure 12 and thus Figure 12 quite simply in now way shows the boundaries of the body-contact region 31 and a corresponding contact being coincident.

As explicitly explained previously, Figure 14 is a top view including the contact mask 36 that is, as its name implies, used for forming the contacts. As shown in the figure, the boundary of the body-contact region 31, which is the larger rectangle in the middle of the figure, is not coincident with the boundary of the corresponding contact, which corresponds to the square 37c in the middle of the rectangle. This

view clearly shows the boundaries of these two components are not coincident. The cross-sectional view of Figure 15 shows this as well, namely with the vertical walls of the contact 38 not being aligned or coincident with the body-contact region 31. This is in contrast to embodiments of the present invention, such as shown in Figure 26, which depicts the body-contact region 61 having a boundary that is coincident with the boundary of the contact 38. The difference between Figure 26 and Figure 12 is blatantly apparent, and the amended language of claim 1 covers the structure of the embodiment of Figure 26. The combination of elements recited in claim 1 is therefore allowable.

Amended dependent claim 2 recites the device of claim 1 wherein the second conductive region comprises at least one first implanted region, having a third doping level lower than said second doping level, and two second implanted regions, having a fourth doping level higher than said third doping level. The first implanted region comprises a peripheral portion contiguous to the second implanted regions at least on one side facing the first conductive region and a transverse portion extending from the peripheral portion, physically separating and electrically connecting the second implanted regions. The transverse portion accommodates the body-contact region. A length of the peripheral portion in a transverse direction perpendicular to a width of the peripheral portion is less than a length of the transverse portion along the transverse direction.

This recited structure is in contrast to the AAPA as illustrated in Figure 14. Although not explicitly shown in this figure taken in combination with Figure 15 shows that the source portion 27 and LDD regions 19 extend continually in the transverse direction corresponding to the cross-sectional view of Figure 15 (i.e., along the vertical direction in Figure 14). In contrast, in the embodiment of the present invention shown in Figures 18-20 and covered by claim 2 the corresponding regions do not extend continually in the transverse direction. As shown in Figure 18, the regions 53, which correspond to regions 50' in Figure 19, interrupt the regions 50'' in Figure 20 along the transverse direction (i.e., the vertical direction in Figure 18). This structural difference is simply not disclosed or suggested by the AAPA.

Furthermore, as previously discussed, according to the AAPA and because of the shape of the source mask 17 and in particular the limited width of portion 17a, the LDD regions 19' are formed each by a single longitudinal portion extending below a respective spacer portion 24 as shown in the attached Figure 14. There is no

transversal portion, and the second implanted region or source 27 in this embodiment is not interrupted by the first implanted portion. Because of the shape of the source mask 52 and in particular the presence of islands 53, source region 27 is not implanted below the island 53, where the transverse portions of the LDD regions 50 form. Figure 19 shows the cross-section through a transverse portion 50' and Figure 20 shows the cross-section where the longitudinal portions 50'' are present.

The combination of elements recited in amended claim 2 is therefore allowable for these additional reasons. These same comments apply with respect to amended dependent claim 3 and thus claim 3 is also allowable for these additional reasons.

Claim 27 has been amended to recite, in part, a body-contact region in the first conductive region where the body-contact region has a boundary that is coincident with a boundary of a corresponding contact. This amendment includes the same language utilized in claim 1 to more clearly recite the interrelationship between the body-contact region and corresponding contact. This amendment in no way necessitates a new search by the Examiner since it is the same as that utilized in previously searched claim 1. Claim 27 is now allowable for reasons similar to those discussed above with reference to claim 1.

The above description indisputably illustrates the differences between the AIPA and the present invention and the undersigned believes the present language is a clear way of claiming that difference. If the Examiner takes issue with the present claim language, however, namely the boundaries of two components being "coincident," then please contact the undersigned at (425) 455-5575 so that we may agree upon language that is acceptable to the Examiner.

All dependent claims are allowable for the same reasons as the associated independent claim and due to the additional limitations added by each of these claims.

The present patent application is in condition for allowance. Favorable consideration and a Notice of Allowance are respectfully requested. If a need for any fee in addition to that paid with this response is found, for any reason or at any point during the prosecution of this application, kindly consider this a petition therefore and charge any necessary fees to Deposit Account 07-1897.

Dated this 26th day of April, 2006

Respectfully submitted,

GRAYBEAL JACKSON HALEY LLP

Paul F. Rusyn
Registration No. 42,118
155 – 108th Avenue NE, Suite 350
Bellevue, WA 98004-5973
(425) 455-5575 Phone
(425) 455-5575 Fax

Enclosure:

RCE Transmittal
Request for Extension of Time
Check #25769 for \$1810.00
Return Postcard